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DIEUCHES ARMATIPES (WALKER) (HETEROPTERA: LYGAEIDAE) NEWLY DISCOVERED IN THE WESTERN HEMISPHERE

THOMAS J. HENRY AND RICHARD C. FROESCHNER

(TJH) Systematic Entomology Laboratory, Plant Sciences Institute, ARS, USDA, % National Museum of Natural History, Washington, D.C. 20560; (RCF) Department of Entomology, MRC-127, National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20560.

Abstract.—The rhyparochromine lygaeid ***Dieuches armatipes*** (Walker) is reported in the New World from the Dominican Republic, Grand Cayman Island, Jamaica, and St. Kitts. Although these are the first confirmed records of this genus and species in the Western Hemisphere, Walker's original description is based on a specimen from "America." Thus, our records challenge the correctness of the recent designation of a neotype from Senegal, Africa. This species is said to be a pest of peanuts in Africa. A redescription and diagnostic information are provided to help distinguish it from other New World Lygaeidae.

Key Words: Heteroptera, Lygaeidae, new record, Western Hemiphere, West Indies, *Dieuches armatipes*

Five specimens of the rhyparochromine lygaeid *Dieuches armatipes* (Walker) have been intercepted by the U.S. Department of Agriculture's APHIS/PPQ personnel since 1984 from the Dominican Republic and Jamaica at ports of entry in the United States. Discovery of the first specimen did not provide convincing evidence that populations of this species occur in this Hemisphere. Additional interceptions and recent collections from Grand Cayman and St. Kitts islands by R. M. Baranowski and W. B. Steiner, however, indicate that *D. armatipes* is established in the West Indies.

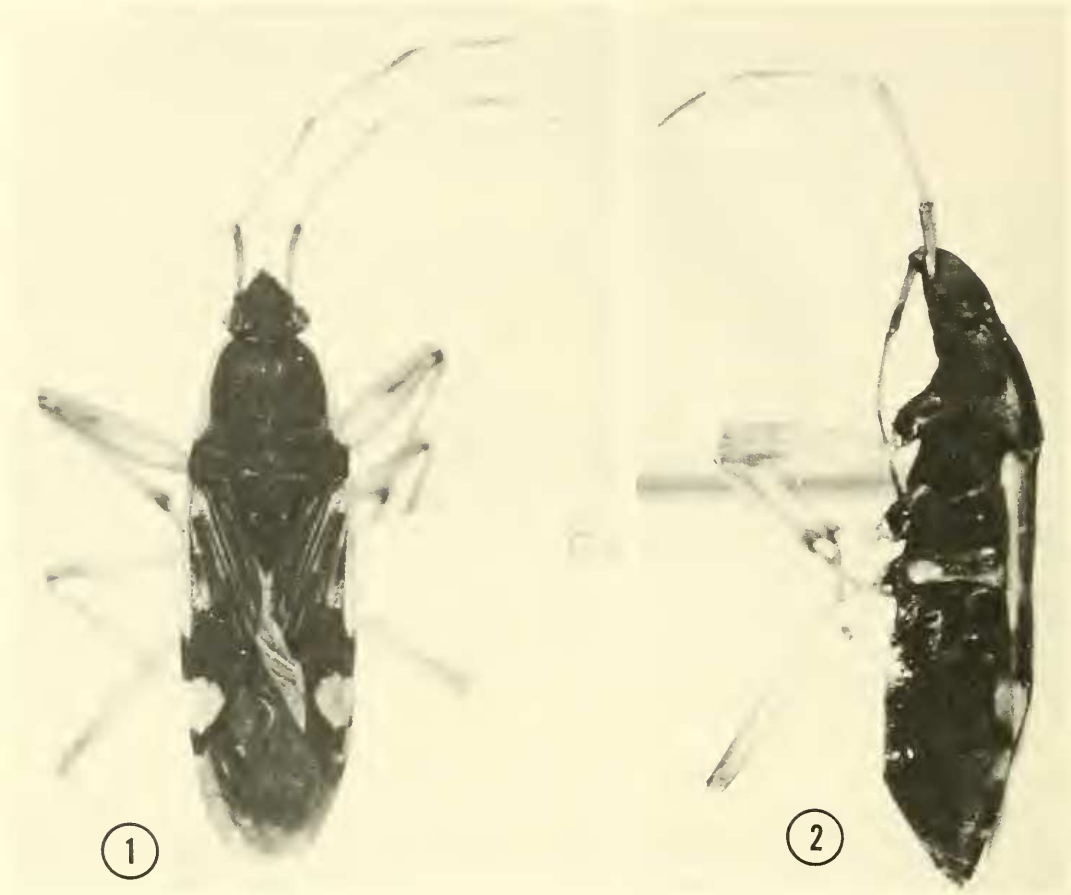
Members of the genus *Dieuches* Dohrn are restricted to the Old World where the majority of the 131 species treated by Eyles (1973) occur in the Afro-tropical Region. *Dieuches armatipes* is one of several species in the genus that have attained pest status. According to Eyles (1973), it has been recorded as a serious pest of peanuts in several localities of Africa where it reduces the oil content and causes the nuts to shrivel and become bitter. Apparently *D. armatipes* will attack peanuts in the ground and those stored in piles after harvest. It also has been associated with melons and peppers, but it may be that these crops stored in the field in crates at harvest merely provide an attractive hiding place for a bug that otherwise normally feeds on fallen seeds in and around a given crop.

In this paper we give the "first" New World records for *D. armatipes,* review its distribution and hosts, and redescribe and provide photographs of the adult to help recognize this adventive Old World bug.

Dieuches armatipes (Walker)
(Figs. 1, 2)

Rhyparochromus armatipes Walker 1872: 91.

Dieuches armatipes: Eyles 1973: 99 (redescription, neotype designation, synonymy, distribution, economic importance).



Figs. 1, 2. Female of *Dieuches armatipes*. 1, dorsal aspect. 2, lateral aspect.

Diagnosis.—*D. armatipes* can be distinguished from all other New World Rhyparochrominae by its large, slender size (more than 10.00 mm long), dorsal position of abdominal spiracles III–IV (tribal character), wide white band on antennal segment IV, and by the uniquely marked hemelytra (Fig. 1), having pale costal margins, pale veins, and a large pale subapical spot on the corium.

This species most likely could be confused with *Elasmolomus sordidus* (F.), the only other large member of the tribe Rhyparochromini known in the New World (from the Sao Paulo region of Brazil) (Slater 1972), but *E. sordidus* is generally yellowish brown with the head, anterior lobe of the pronotum, and basal third of the scutellum dark brown.

Dieuches armatipes keys to *Balboa ampliata* (Barber) [as *Dieuches occidentalis* Torre Bueno and now in Ozophorini] in Torre-Bueno (1946) based on the curved lateral abdominal sutures, the long combined lengths of rostral segments I and II, the widely placed trichobothria, the carinate lateral margin of the pronotum, the slender, nearly glabrous antennae, and weakly punctate pronotum, with the calli having weak, scattered punctures. It is readily separated from *B. ampliata* based on the rhyparochromine tribal character of dorsal spiracles on abdominal segments 3–4, and further by the larger size, more widely explanate pro-

notal margins, and by the wide white band on the basal half of antennal segment IV.

It keys to *Peritrechus* Fieber in Slater and Baranowski (1990) based on the incomplete, forward-curving, lateral abdominal sutures and dorsally placed abdominal spiracles 3–4. It is readily distinguished from this genus by the much larger size (*Peritrechus* spp. 6.00 mm or less), widely explanate pronotal margins, the white band on antennal segment IV, and the numerous spines on the profemora (3 or less in *Peritrechus*).

Description.—[measurements are for 4 ♀♀ and (in parentheses) 1 ♂]: Rhyparochrominae: Rhyparochromini: Elongate, subparallel, relatively large, length 10.00–10.67 mm (11.00 mm), width across widest area of hemelytron 2.88–3.46 mm (3.16 mm). *Head:* Length 1.44–1.56 mm (1.44 mm), width across eyes 1.60–1.68 mm (1.64 mm), vertex 0.84–0.88 mm (0.88 mm); fuscous, impunctate except for finely punctate central area of vertex; buccula short, narrow, gular groove short, extending only to level even with anterior margin of eye; antenniferous tubercle weakly declivent, arising at level even with lower ⅓ of eye; ocelli widely separated, set near inner posterior margin of eye. *Rostrum:* Length 4.32–4.44 mm (4.50 mm), extending to bases of mesocoxae. *Antenna:* Yellowish brown, segment I and apex of II darker brown, segment IV dark brown with a wide white band on basal half; segment I, length 1.08–1.12 mm (1.20 mm); II, 2.08–2.24 mm (2.32 mm); III, 2.00 mm; IV, 2.00 mm (2.12 mm). *Pronotum:* Length 1.96–2.24 mm (2.52 mm), basal width 2.52–2.84 mm (2.80 mm); trapeziform, dark brown or fuscous, with explanate lateral margins (narrower on anterior lobe than diameter of 1st antennal segment) and part of median line yellow; anterior lobe densely, but finely punctate, calli quadrate, weakly shining; posterior lobe deeply, but less densely punctured than anterior lobe, posterior margin trunctate. *Scutellum:* Triangular, much longer than wide, apex extending to about middle of corium, fuscous, with apex and small spot on either side of middle yellow. *Hemelytron:* Extending to apex of abdomen in female and slightly beyond in male; largely fuscous, with basal ⅔ of costal margin, large subapical spot, and cubital, claval, and radial veins yellow; membrane dark brown or fuscous, with bases of veins yellow. *Ventral surface:* Fuscous, with distal part of acetabula, posterior edge of metapleural region, and lateral margins of abdominal segments 5 and 6 invaded by yellow; abdominal spiracles III and IV dorsal. *Legs:* Pale yellow, apices of pro- and mesofemora usually fuscous.

Taxonomic notes.—Eyles (1973) provided photographs (figs. 72, 73) and a line drawing (fig. 74) of the adult, figures of male and female genitalia (figs. 66–71), and a key to the species of *Dieuches*.

Distribution.—This species is known to range over most of Africa, north to at least Spain. It is one of five species of *Dieuches* (*D. armipes* (Fabricius), *D. mucronotus* (Stål), *D. schmitzi* Reuter, and *D. syriacus* Dohrn) that occur in the Mediterranean Region (Eyles 1973).

New World records.—*Dominican Republic:* 1 ♂, 1 ♀, intercepted at Elizabeth, New Jersey, 15 Feb. 1984, 1 May 1986 (U.S. Natl. Mus. Nat. Hist., Washington, D.C.—USNM); 1 ♀, intercepted at Ft. Lauderdale, Florida, 9 April 1986 (USNM); 1 ♀, intercepted at Miami, Florida, 2 Aug. 1990 (USNM). *Grand Cayman Island:* 1 ♀, South Sound, 20 June 1986, P. Fitzgerald (University of Florida, Homestead—UFH); 1 ♂, ♀, Rum Point, 19°22'N, 81°16'W, 22 Feb. 1993, W. E. Steiner & J. M. Swearingen (USNM). *Jamaica:* 1 ♀, intercepted at Miami, Florida, 27 May 1986 (USNM). *St. Kitts:* 1 ♂, Garvey's Estate, 14 Aug. 1989, Knight, Wallace, & Picard, BL trap (UFH); 1 ♂, Burkley's Estate, 4 May 1990, Knight, Wallace, & Picard, BL trap (UFH); 1 ♂, Agronomy Dept., 13 Aug. 1990, Knight, Wallace, & Picard, BL trap (UFH); 1 ♀, Cardi, 24 May 1990, Knight, Wallace, & Picard, BL trap (UFH).

Discussion.—Because the intercepted specimens were associated with three different crops (pineapple, *Ananas comosus* (L.) Merr.; melons, *Cucumis melo* L.; and peppers, *Capsicum* sp.), they were probably merely acting as "hitchhikers" trapped in fieldpacked containers, rather than serving as primary pests feeding on the produce itself.

The two specimens from Rum Point, Grand Cayman, were collected on a dune strand crest in leaf litter under the shrub *Scaveola plumieri* (L.) [Goodeniaceae] and adjacent clumps of searocket, *Cakile lanceolata* (Willd.) O. E. Schulz [Asteraceae]. Several other specimens also were observed (W. E. Steiner, Jr., pers. comm.) but not collected, indicating that *D. armatipes* was relatively common at this site.

Although our records apparently represent the first authentic ones from the Western Hemisphere, it is curious that Walker (1872: 91) described *D. armatipes* from "America. Presented by Capt. Friend." Eyles (1973) redesignated the type locality as Senegal, Africa, and disregarded Walker's type locality by stating "Purported to be from America, this was doubted by Distant (1901) and even earlier by Dallas (1852). . . ." We note that Van Duzee (1917) also rejected its New World presence with the notation "Not American."

The apparent ease in which this species stows away in commerce makes it quite plausible that *D. armatipes* arrived early in the New World in ship's cargo and ballast material during the 18th and 19th centuries. We feel that our findings now challenge the virtue of Eyles' decision to redesignate the type locality. Captain Friend's specimen certainly could have represented a legitimate record from "America."

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